Flood Cross Cut

SESSION 3 | REPORT OUT



Interplay with Climate and Land Use

Science Question	What is the likely interplay of climate and catchment physical changes (indicators of abrupt system shifts) on flood occurrence and predictability? How do changes in climate systems and land systems (e.g., dam-induced land use changes, etc.) co-evolve and cascade from the atmosphere to the land surface and affect catchment susceptibility to flooding? How do the sensitivity and uncertainty of flood simulations increase under non-stationarity?		
Priorities	To determine how to create projections of future physical changes in catchments driven by human activity. Example: Reservoir Management, Urbanisation, and changes in agriculture.	Understanding the dynamic interactions between the policies and potential land use changes. Feedback Mechanisms (due to Evapotranspiration)back to the atmosphere due to Land Use changes	To understand sensitivity of flooding at different spatial scales and flood types and uncertainty of future scenarios for land use changes.
Existing efforts	Scenarios, Projections using Neural Networks, Agent based modeling, Game theory approaches, probability based modeling, Expert opinions. Changes in existing Guidelines based on stationarity assumptions.	Trying to measure the effect of policies, which is long term. We use approaches based on theory and scenario assumptions.	Using different scenarios, Consider efforts in evaluating flood vulnerabilities, flood risk at different locations, e.g flood vulnerabilities studies are done in coastal areas, differently from inland waters also flood risk assessments are valuable for policy makers, there are a lot of efforts at what level we do flood risk
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